Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Promoting Expanded Opportunities for Radio	)	ET Docket No. 10-236
Experimental and Market Trials under Part 5	)	
of the Commission's Rules and Streamlining	)	
Other Related Rules	)	
	)	

To: The Commission

Comments of EIBASS

Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) hereby respectfully submits its comments in the above-captioned notice of proposed of rulemaking relating to new categories of experimental stations in the Part 5 Experimental Radio Service (ERS) rules.

I. If New Categories of Experimental Stations Are To Be Created, the Commission Must Ensure that the New Part 5 Rules Also Adopt Safeguards to Cure the Current Abuses of ERS Stations

1. This notice of proposed rulemaking (NPRM) proposes to create three new categories of experimental licensing: Program Experimental Licenses (PELs), Innovation Zone Experimental Licenses (IZELs), and Medical Program (MEDRPO) experimental licenses. The NPRM also proposes to update and streamline the Part 5 Experimental Rules.

2. At paragraph 4, the NPRM states "Our ERS has a record of success." Unfortunately, it also has a record of abuse, and bringing an end to these abuses is the primary reason for EIBASS filing these comments. So long as the new Part 5 rules adopt steps to end systemic abuses, EIBASS generally concurs with the proposals for PELs, IZELs or MEDRPO experimental licenses.

II. The Alfred Mann Foundation WD2XLW Experimental License Given at the Start of the NPRM as a Good Example

3. Also at paragraph 4, the NPRM offers the experimental license issued to the Alfred Mann Foundation (AMF), WD2XLW, as a good example of an ERS license. The stated WD2XLW

purpose is to develop wirelessly controlled implantable medical devices, and EIBASS, of course, has no problem *per se* with the use of wireless technologies to advance medical research and treatment. However, and as documented by the attached Figure 1, the WD2XLW exhibits were suppressed, and an e-mail request for these exhibits never received a reply. When WD2XLW progress reports were submitted by AMF without any request for confidentiality, they turned out to be duplicative, boiler-plate updates, devoid of any technical details that would provide interested parties the ability to judge the veracity of the various claims made by AMF as to the system's immunity to harmful interference from incumbent Part 74, Broadcast Auxiliary Services (BAS), Subpart D, Remote Pickup (RPU) stations operating at 455–456 MHz and Part 90 medical first responders.[1] These RPU and Part 90 operations would be entirely inside the 451–457 MHz band proposed by AMF for Medical Micropower Network Services (MMNS) devices, now ET Docket 09-36 (one of four 6-MHz wide bands proposed by AMF). The other three bands are 413–419 MHz; 426–432 MHz; and 438–444 MHz. EIBASS notes that these other three bands involve both federal government spectrum and other non-federal services, including but not limited to high powered amateur radio transmissions.

4. Thus, EIBASS sees the cited WD2XLW experimental license as an excellent example of an abuse of the experimental process, where technical and operational information is intentionally suppressed. EIBASS understands the purpose of experimental licensing is the advancement of the art of radio science. One of the consequences of the AMF suppression of relevant technical detail is that the likely interference susceptibility of MMNS devices from incumbent RPU operations cannot be evaluated. While normally EIBASS would not object if a party proposed a system that would receive harmful interference from RPU operations, but not cause interference to RPU operations, the proposed medical use means that RPU licensees might be retroactively required to restrict their operations in order to protect imprudently allocated and susceptible to interference MMNS devices. RPU stations could lose their current primary status in a band vital to broadcast operations.

---

[1] EIBASS notes that two of the most recent WD2XLW progress reports do not have the "not available" flag. However, clicking on the links to those reports returns two 2-page reports dated July 6, 2009, and May 17, 2010, which are almost word-for-word identical and are frustratingly vague. That is, the reports contain no detailed technical data or other results that would allow an interested party such as EIBASS to independently evaluate the effectiveness of any interference-avoiding schemes. Instead, there are only generalized statements such as "version two MCU radio hardware succeeded in substantially improving receiver linearity to facilitate interoperability signal processing in shared spectrum;" and "the spectral excision algorithm is operating as expected;" and "the detection and excision mechanisms are being tested against these captured signals in order to study the effects of parametric changes on a repeated signal pattern."

5. Exactly such a scenario occurred in the early days of digital television (DTV), when previously precluded and therefore vacant analog TV channels were used for medical telemetry for patients in Intensive Care Units (ICUs) and Coronary Care Units (CCUs) in hospitals and other health care facilities. These devices were operating under Part 15 , meaning that they were not entitled to interference protection from licensed stations. When new DTV stations commenced operation on previously precluded and vacant TV channels, that new operation then caused the medical telemetry devices to malfunction .[2] Faced with an interference problem with life-safety implications, the Commission's solution was to place a condition on all DTV station construction permits. That new condition required those permittees to first survey all health care facilities in their operating area to ensure that the new DTV channel was not used by bottom-of-the-RF-food chain Part 15 medical telemetry devices. And to add insult to the injury of delay, the cost of the survey had to be born by the DTV permittee. If Part 15 medical telemetry use was found, then the new DTV operation would have to be delayed until the imprudent and unprotected medical telemetry use had been transferred to another unused TV channel. That unused TV channel could quite possibly be a channel subsequently assigned to another full power, Class A TV, low power TV or TV translator station in the succeeding post-transition period. Therefore the EIBASS concern that an allocation of frequencies designated for a medical application where existing, licensed and operating facilities could be reasonably expected to cause interference to the medical device and potentially be forced by the Commission to bear the financial and technical burdens of remediation is well founded.

III. The WC9XSK Fiasco (AWS Interference to ENG)

6. EIBASS can provide another example of an ERS authorization gone bad: WC9XSK, issued to Ericsson Inc.[3] That Special Temporary Authority (STA) experimental authorization had a condition requiring Ericsson to conduct prior coordination with TV Pickup licensees before commencing operation. Ericsson failed to do so, and its operations at 2,110-2,120 MHz caused Station WABC-TV in New York City several weeks of harmful interference to its North Shore electronic news gathering (ENG) receive only (RO) site in Queens (TV Pickup Station KA40716). It took WABC-TV several weeks and considerable technical resources to track down the interference caused by the Ericsson WC9XSK experimental operation. Ericsson shut down the experimental operation upon being advised of the interference they caused. Had

---

[2] The case of WFAA(TV), N08/D09/FCD08, in Dallas, TX, was probably the most high-profile example. The newcomer operation on D09 caused harmful interference to Part 15 medical telemetry devices in the Dallas area, operating on the previously precluded and therefore vacant Channel 9.

[3] The STA also authorizes operations on 1,710–1,720 MHz, but this 1.7 GHz operation (for handsets) is not an interference threat to 2,025–2,110 MHz TV Broadcast Auxiliary Services (BAS) operations.

Ericsson complied with the prior coordination condition on the STA, WABC-TV would have been alerted to that station's existence, and could have immediately contacted Ericsson, instead of having to first suffer weeks of interference.[4]

7. Thus, despite the WC9XSK STA containing an explicit frequency coordination condition ("operations are subject to prior coordination with local point-to-point microwave and TV pickup operations") and Ericsson ignoring that condition causing many weeks of harmful interference before the interference source was tracked down by WABC-TV, and even though Section 1.80 of the Commission's rules regarding forfeiture proceedings lists "Failure to engage in required frequency coordination" as the basis for a $4,000 Notice of Apparent Liability (NAL), EIBASS knows of no consequences Ericsson suffered for its failure to frequency coordinate and causing harmful interference to a licensed service.

8. EIBASS has reason to believe many experimental licenses that have the "SBE clause" appearing on their experimental authorization, similarly ignore this notification requirement. The SBE clause states:

> Operation is subject to prior coordination with the Society of Broadcast Engineers, Inc. (SBE); ATTN: Executive Director; 9247 North Meridian Street, Suite 305; Indianapolis, IN 46260; telephone, (866) 632-4222; FAX, (317) 846-9120; e-mail, executivedir @ sbe.org; information, www.sbe.org.

See the attached Figure 2, giving the genesis for this informal OET policy, for which EIBASS gives a "well done" to the Commission.[5]

9. Section 5.5 of the Commission's rules for experimental operation states that an experimental station may not cause harmful interference to any licensed station operating in accordance with the Part 2 Table of Frequency Allocations; that is, an experimental station may not cause harmful interference to a licensed service. For this reason, EIBASS is not unduly concerned when an experimental authorization is granted that includes broadcast or BAS frequencies, so long as it contains the SBE clause. The logic is that if a broadcaster or local BAS

---

[4] Ericsson subsequently amended its WC9XSK experimental STA to just the top half of the AWS A-block, to mitigate the interference to the North Shore ENG-RO site. It should be noted that, at the time, the WABC-TV "home channel" was TV BAS Channel A7, at 2,093-2,110 MHz. Of course, with the completion of the conversion of the 2 GHz TV BAS band from analog operations at 1,990–2,110 MHz to digital operations at 2,025–2,110 MHz, in July of 2010, the WABC-TV home channel is now TV BAS Channel A7d, at 2,097.5–2,109.5 MHz.

[5] Examples of experimental authorizations with the SBE clause include WB2XJN, WB9XLW, WB9XSY, WC2XLF, WC2XWA, WC2XYE, WC9XCR, WC9XCW and WC9XXY. However, the system is not perfect, as there are also examples of experimental authorizations that included broadcast or BAS frequencies, but did *not* get the SBE clause, such as WB2XCJ. WF2XPE, WC2XOV, WE2XXA, WE9XIF and WP2XPD.

coordinator knows of co-channel experimental operation in their operating area, and in the event of interference, a broadcast licensee can then contact the experimental licensee and request an on-off test, to determine if the experimental station is the source of the interference. However, this "interference safety net" doesn't work when experimental licensees fail to contact the SBE Executive Director, as required, so they can then be referred to the appropriate local BAS coordinator or pertinent local BAS licensee(s), and penalties are not assessed when experimental licensees fail to comply.

10. Because as the WC9XSK incident showed that it can be difficult to track down a non-steady state, but nevertheless repeatedly occurring interference source, the prior notification requirement for experimental operation is critical. Yet many times when asked, the SBE Executive Director reports that he had never been contacted by the holder of a particular experimental licensee. Thus, the Commission needs to vigorously enforce any prior coordination/notification requirements through spot checks, and NALs should be assessed (and publicized) for experimental licensees failing to do so. This should be done regardless of whether actual harmful interference was caused. If harmful interference was caused, then the NAL amount should be adjusted upwards.

IV. The WB9XSY/WC9XCR Abuse (NPP Operators Use of Wireless Microphones)

11. These experimental licenses involved after-the-fact authorization for approximately sixty nuclear power plant (NPP) operators to continue using wireless intercoms on frequencies reserved for Part 74, Subpart H, Low Power Auxiliary (LPA) BAS stations—more commonly known as wireless microphones or wireless headsets. NPP operators had purchased wireless headsets manufactured by Telex Communications, but no licenses for their use were obtained as NPP operators are not eligible for Part 74 LPA licenses.

12. When this unlicensed use was questioned by an SBE frequency coordinator, damage control was initiated by Telex, by obtaining an experimental license, WB9XSY. However, this was a stop gap measure, to temporarily legalize the operation. In reality, there was nothing "experimental" about the use of wireless headsets by NPP operators. After the Commission refused to renew the Telex experimental license[6], another organization, the Nuclear Energy Institute (NEI), came to the rescue by applying for a replacement and essentially identical experimental license, WC9XCR. This experimental authority suffered from the same defects as

[6] One of the issues was that Telex had no control over how NPP operators used their headsets, and therefore Telex could not enforce its promise that the headsets would only be used inside the shielded containment vessel of a NPP.

the Telex experimental license, and the Commission again balked at renewing the experimental license. Of course, it would have been better if these faux experimental licenses had never been granted in the first place.[7]

13. NEI then petitioned the Commission to allow NPP operators to obtain permanent LPA licenses, and this petition became ET Docket 05-345. SBE, the National Association of Broadcasters (NAB) and the Association for Maximum Service Television (MSTV) filed in opposition, on the premise that NPP operators are not eligible for BAS LPA licenses, and that wireless microphone frequencies on UHF TV channels have already become a scarce commodity due to the use of TV channels by Digital TV, Class A TV, low power TV, TV translator stations, and, of course, until June 2009 full-service analog TV stations, all of which constituted higher-priority use. Also, NPP operators already have many other frequencies available to them.

14. When the ET 05-345 rulemaking did not go to NEI's liking, it then tried "bureau shopping" at the FCC and petitioned the Wireless Telecommunications Bureau (WTB) to make nuclear power plant operators eligible for permanent BAS LPA licenses. This became WT Docket 09-176. EIBASS, and others, filed in opposition to this second attempt at legitimizing the ill-advised investment in Telex headsets by NPP operators. However, with the release of the January 15, 2010, WT Docket 08-166 Report & Order (R&O) requiring wireless microphone licensees to vacate operation on now former TV Channels 52 through 69, and temporarily declaring wireless microphones with powers of 50 mW or less to be Part 15 devices, EIBASS abandoned its effort to fight NEI's second-attempt rulemaking. That is, the unethical marketing of Part 74-only wireless microphones to ineligible entities, such as NPP operators as well as churches, and the subsequent illegal, unlicensed operation of those Part 74-only transmitters had ultimately been rewarded.

15. EIBASS therefore offers the WB9XSY and WC9XCR experimental authorizations as examples of use of ERS licensing as a subterfuge to solve an eligibility problem when there is

---

[7] EIBASS notes that on July 16, 2008, Public Interest Spectrum Coalition (PISC) filed a complaint about the marketing of Part 74 wireless microphones to churches, even though churches are generally not eligible to even hold an LPA license. The wireless microphones in question are only FCC approved for Part 74 operation, and operate with power levels too high to qualify as unlicensed Part 15 devices. This complaint became ET Docket 08-167. However, because only the unauthorized use of a radio transmitter is illegal in the United States (that is, unlike many countries, the mere possession of an unlicensed (but FCC-approved) radio transmitter is not illegal), EIBASS had to agree with the subsequent comments of Shure, Inc. and Sennheiser Electronic Corporation, major manufacturers of wireless microphones, that so long as their devices had proper Part 2 equipment certification, they have no responsibility to ensure that the party buying their wireless microphone has a LPA license, or even eligibility for an LPA license.

nothing experimental about the use. EIBASS urges that this instant ET Docket 10-236 rulemaking adopt strict controls to prevent similar abuses for PELs, IZELs and MEDPRO experimental licenses remedially seeking authorization. Strict controls built into the ET Docket 10-236 Report and Order (R&O) should prevent these new classes of experimental licenses from becoming short cuts for licensee eligibility issues.

V. The WD2XPK Abuse (Trucker TV)

16. WD2XPK was an experimental license issued to Clarity Broadcasting Systems, LLC ("Clarity"), for a proposal to use the 2 GHz TV BAS band for a point-to-multipoint system that became known as "trucker TV." It was a proposal to install off-the-shelf microwave transmitters employing 64 QAM digital modulation at approximately 250 truck stops operated by Clarity's parent, Flying-J Communications. The abuse started with Clarity's failure to provide reasonable advance notice of the WD2XPK demonstrations at its Frazier Park, CA., truck stop on Interstate 5 (I5), at the top of the portion of I5 known as "The Grapevine". SBE representatives were given only two weeks advance notice of the demonstration and were further told the date was nonnegotiable. Although a two-week notice might be reasonable for commercial entities, it was not reasonable for volunteer SBE representatives who must often schedule their efforts around work commitments. Then, Clarity refused to let the SBE representatives see the transmitters in use or make power measurements on those transmitters. Also, it was discovered that Clarity had built its experimental facilities 4 km from the coordinates authorized in the WD2XPK authorization.

17. All of these abuses were documented in writing, in multiple SBE filings, and two EIBASS filings.[8] Yet rather than result in the termination of the experimental authority, Clarity was able to obtain a successor experimental authorization, WE2XNE. These experimental grants are, in EIBASS' view, a prime example of attempted use of the ERS to secure a back-door reallocation of a frequency band[9] without going through the rulemaking process. Indeed, to this

---

[8] The SBE filings were dated November 22, 2005; March 14, 2006; September 22, 2006; November 20, 2006; June 19, 2007; and July 30, 2007. The EIBASS filings were dated January 8, 2010, and February 19, 2010.

[9] Namely, the 2,025–2,110 MHz TV BAS band. The Clarity approach was to file Part 78 Cable Television Relay Service (CARS) applications for the 2 GHz TV BAS band, which is shared with Part 74 BAS stations, but that shared operation is only for mobile operations and only for private, internal communications. Grant of fixed, Trucker TV base stations would have created a point-to-multipoint commercial radio service, similar to the 2.6 GHz Broadband Radio Service (BRS) model (previously the Multipoint, Multichannel Distribution Service, or MMDS). Grant of Trucker TV would have required six rule waivers: Section 78.1, regarding the purpose of 2 GHz CARS stations (*i.e.*, for private, internal licensee communications only); section 78.18(a)(6), regarding permissible service; Section 78.36, regarding frequency coordination requirements; Section 78.101, regarding power limitations; Section 78.103(e), regarding emission limitations; and Section 78.107, regarding transmitting equipment and installation.

day no NPRM for Trucker TV has been issued. Furthermore, although there have been multiple opposition filings associated with the trucker TV public notice[10], by EIBASS, NAB, NASA, MSTV, SBE, and others, none show up in the Electronic Comment Filing System (ECFS), and hard copies of Clarity's filings must therefore be manually obtained. EIBASS submits that this places an unnecessary burden on parties wishing to comment, and therefore that bypassing the ECFS should be avoided unless there is a compelling reason to do so. Since experimental authorizations have the potential to interfere with licensed operations, the ERS rules should carry a provision that proposals for rule waivers, especially waivers so numerous and extensive as to constitute a *de facto* band reallocation, should be entered in the ECFS.

VI. The WE9XHV/WF2XKW Frivolities

18. The WE9XHV experimental STA grant indicated that it was "to transmit visual and aural signals to a pickup point for recordation and internet transmission for family viewing, using TV Channel 9." The authorized emissions were 5M75C3F and 250KF3E; that is, old-style, NTSC television. Yet the experimental STA was granted in March 2010, nine months after the end of the DTV transition period and the cessation of analog broadcasting by full-service TV stations in the United States. The station locations were Kansas City and Gladstone, MO. EIBASS has to wonder why this experimental application was granted; that is, how was use of analog TV channel 9 to relay audio and visual programming in the Kansas City area, for "family viewing" no less, a program of experimentation? Then, on January 5, 2011, a similar experimental license, WF2XKW, was granted. EIBASS has seen similar experimental grants over the years that, on their face, appear to have no credible and serious experimental purpose. EIBASS would like to see the Commission adopt new experimental rules that encourage proposed experimental applicants to make their case based on claims that genuinely advance radio science. This encouragement that EIBASS proposes should include language requiring that, at the close of the experimental authorization term, experimental licensees file reports with the Commission using the ECFS so interested parties and the Commission can assess how well the claims for the experimental grant were met. Such a reporting requirement would improve credibility requirements for the granting of experimental authority. EIBASS hopes the proposed modified Part 5 rules will provide Commission staff with the language and mechanisms to do just that.

---

[10] *Waiver Requests by Clarity Media Systems, LLC To Operate CARS Stations at Flying J Travel Plazas*, DA 06-1664, August 23, 2006.

VII. The WC2XOV "Why Bother?" Experimental License

19. In this instance, WC2XOV experimental license was issued in May 2010 to Lockheed Martin Corporation. As shown by Figure 3, the license has no frequency information; just the notation, in large bold letters, "ANY INFORMATION NOT CONTAINED IN THIS LICENSE MAY BE CLASSIFIED." EIBASS has to wonder what was the purpose of even releasing the experimental license.

20. Is Lockheed Martin Corporation operating on broadcast or BAS frequencies? Unfortunately, there is no way for EIBASS, or broadcasters in the Moorestown (Burlington), New Jersey, area, to know.

VIII. Notification Burden Should Be to Newcomer PELs and IZELs, Not to Existing Licensees

21. At paragraph 27, the NPRM proposes to give notice of new PELs and IZELs by posting information about such grants to a new, to-be-developed Commission web site. EIBASS opposes this approach, as it would place a burden on all existing Commission licensees to regularly check the web site for potentially interference-causing experimental operations which have been proposed for a co-channel frequency in their vicinity. At a minimum, notice of PEL and IZEL applications needs to be given on the FCC Daily Digest. Even better, the proponent PEL or IZEL should be required to notify all co-channel licensees within 80 km in a manner consistent with or similar to the prior coordination notice (PCN) process specified in Section 101.103(d) of the FCC rules.

22. Even more objectionable to EIBASS is the paragraph 27 proposal that existing Commission licensees would have the burden of proof that proposed PEL or IZEL operation(s) would cause harmful interference. Given the non-standard nature of experimental operations, it would be unreasonable to require existing Commission licensees to "prove" that a proposed PEL or IZEL would cause interference. Existing licensees, perhaps unfamiliar with new and emerging technologies, lacking complete technical data that may not be provided by the proponent, would have no ability to comply with the proposed Commission directive. Rather, the burden of proof should be placed on the PEL or IZEL, to demonstrate that its proposed experimental operation would be unlikely to cause interference to incumbent licensees. EIBASS suggests that potential experimental licensees could meet their burden of proof by working more closely with those who could be potentially affected, as a condition of an experimental authorization grant.

23. Given that experimental operations are always on a non-interference basis (NIB), the no-interference showing need not be too strict or exhaustive, so long as nearby, co-channel licensees are provided notification of the new experimental operation and a "stop-buzzer" shutdown notification telephone number which will be staffed whenever the experimental operation is in progress is maintained. The Commission will also need to conduct periodic spot checks, to ensure that a knowledgeable party with shut-down authority actually answers the provided telephone number. And if not, an NAL should be routinely issued. The Commission should also issue directives to all FCC field offices that interference complaints lodged by any licensee in a band where experimental operation is occurring be given a high priority for resolution. EIBASS implores the Commission to make the message clear and unmistakable: If you are an experimental licensee, PEL, IZEL, or otherwise and fail to maintain a staffed, "stop-buzzer" telephone number when required, you will be fined, and possibly have your experimental authority revoked.

IX. IZEL Technical Qualification

24. At paragraph 41 the NPRM proposes IZEL licensees "must hold the appropriate technical credentials demonstrating advanced technical competence in radio engineering." EIBASS supports this requirement and suggests further that if the IZEL authorizes operation on broadcast or BAS frequencies, that the person certifying the application be either a registered professional engineer (P.E.), or certified by the SBE at the Senior Broadcast Engineer or higher, or hold International Association for Radio, Telecommunication & Electromagnetics, Inc. (INARTE) Electromagnetic Compatibility (EMC) certification.

25. The issue of what constitutes a sufficiently isolated area to allow an IZEL is problematic, as it is a complex combination of geographic location, terrain isolation, frequency bands, and even population density (*i.e.*, a metric for consumer electronics use). EIBASS believes this question will require case-by-case reviews based on proposed uses. However, once a location is deemed sufficiently isolated to be an IZEL candidate, EIBASS cautions the Commission to adopt rules that guard against "venue creep" that would bring the IZEL operation into more convenient locations closer to population centers, where interference would become more likely. For example, EIBASS recalls the assurances given by MSS feeder uplink proponents being granted entry to the 13 GHz TV BAS band, in the ET Docket 98-206 rulemaking: Namely, that such uplinks would only be built in "remote areas." Yet in 2000, an application for a combined MSS feeder uplink/downlink was granted to PamAmSat Licensee Corporation, at Fillmore,

Ventura County, CA; a site less than 60 km from Los Angeles.[11] This is not a "remote" location in EIBASS' view.[12]

X. MEDRPO Experimental Licenses

26. At paragraph 48, the NPRM proposes to create a Medical Program (MEDPRO) experimental radio license, available to "hospitals or other health care institutions." First, EIBASS notes that "other health care institutions" is a wide and open-ended category. As suggested later in paragraph 48, it would be better to narrow the eligibility universe and require the applicant health care institution to hold a Food & Drug Administration (FDA) Investigational Device Exemption (IDE) as the first step in demonstrating a credible program needing a MEDPRO experimental license.

27. As noted at paragraph 50, EIBASS agrees it is important the Commission limit eligibility for MEDRPO experimental licenses "to the right institutions." Accreditation by a nationally recognized certifying body or a federal government entity such as Department of Veterans Affairs, the U.S. military, or the National Telecommunications and Information Administration (NTIA) should be another evidence of eligibility requirement. EIBASS agrees that, in all cases, applicants seeking MEDRPO experimental licenses must demonstrate skills in basic radio systems management. EIBASS again suggests that if the experimental operation would include broadcast or BAS frequencies, a person associated with the experimentation must be either a P.E. or hold SBE certification at the Senior Broadcast Engineer level or higher. If the program of experimentation does not involve broadcast or BAS frequencies, then the requirement could include in the alternative a licensed P.E., or a person holding senior engineer or higher status in a nationally recognized technical society, such as the Institute of Electrical and Electronic Engineers (IEEE), or the International Association for Radio, Telecommunications & Electromagnetics, Inc. (INARTE); for example, a person holding INARTE Electromagnetic Compatibility (EMC) certification.

---

[11] Based on the Federal Information and Processing Standards (FIPS) reference coordinates for Los Angeles, which are 34-15-10 N, 118-22-30 W, NAD83.

[12] Call sign E000063. Of course, this was a spectrum-warehousing full-spectrum, full-arc grant, which included the following special condition (bolding added):
`With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary` **`or non-geostationary`** `orbit for the emissions designed in Section B of this license.`

XI. ERS Grants Should Not Be a Substitute for Non-Experimental STAs

28. EIBASS notes that parties have requested and been granted ERS licenses for operations that appear designed to generate revenue and not further the technical state of the art. A prime example is Experimental Special Temporary Authority (STA) Station WC9XSV, issued to Broad Comm, Inc. (Broad Comm), for the Red Bull Air Race World Series 2006. Another example is Experimental STA WE9XMY, again issued to Broad Comm, where the application stated its purpose was "…to allow use of frequencies in the 1–2 GHz range for the purpose of providing portable video for the televised network coverage of the U.S. Open Tennis event." Also WE9XMJ, "... to support the operation of the World Equestrian Games (WEG) as well as providing portable video for the televised coverage of event and related activities," WE9XBO, to "... provide portable video and logistics support for the televised coverage of the Presidents Cup Golf event and related activities," within a 16.2 km radius circle in San Francisco, and WE9XLO, "... for collecting continuous video data from an aircraft that will fly over the Gulf [of Mexico]. The video feed needs to be relayed to nearby receiving stations either on land or on vessels near the aircraft." Although EIBASS does not question the validity of the Massachusetts Institute of Technology Center for Ocean Engineering (MIT-COE) need for video coverage of the Gulf of Mexico oil spill, on whose behalf Broad Comm indicated it was applying, there again does not appear to be anything experimental about the use of readily available 2 GHz microwave transmitters to relay video from an airborne platform; broadcasters do this routinely using ENG, when the news story justifies the expense of an airborne feed. Indeed, an FCC General Menu search for the Broad Comm FCC Registration Number (FRN) shows 232 entries. While EIBASS notes that Broad Comm has been careful to properly frequency coordinate its requested operations, EIBASS submits that there is no "experimentation" going on for the frequencies and operations that Broad Comm requests.

29. Broadcast Sports, Inc. (Broadcast Sports), is another entity that regularly applies for (and is granted) ERS STAs that appear to have no experimental purpose, but instead are end runs around proper Media Bureau (MB) or Wireless Telecommunications Bureau (WTB) STAs. For example, experimental STAs WE9XMI, WE9XML and WE9XOR, all issued to Broadcast Sports and all having as their stated purpose "... to coordinate wireless production activities at televised sports competitions and other activities of national significance." Venues include Ladies Professional Golf Association (LPGA) Golf, Pinnacle Country Club, Rogers, AR; Nationwide Golf, Sobodba Springs Country Club, San Jacinto, CA; Champions Golf, Prestonwood Country Club, Cary, NC; National Association of Stock Car Auto Racing (NASCAR) National Safety Council (NSC), New Hampshire International Speedway, Loudon,

NH; NASCAR NSC, Richmond International Raceway, Richmond, VA; and National Hot Rod Association (NHRA), Lowes Motor Speedway Z Max Dragway, Harrisburg, NC.

30. EIBASS of course encourages experimentation and advancement of the state-of-the-art involving wireless communications. Virtually all radio frequency (RF) technology common today was originally experimental. Yet it appears that many applicants believe that obtaining non-experimental STAs from the FCC's Media Bureau (MB) or Wireless Telecommunications Bureau (WTB) is challenging, difficult, and time consuming, while obtaining an ERS STA from the Office of Engineering and Technology (OET) is easy.[13] EIBASS recommends that this abuse of the ERS process be stopped, and that applications for experimental STAs that do not involve any novel or new use of RF, but instead need temporary authorizations for frequencies involving readily available radio hardware for their intended application, be returned, with a suggestion that the appropriate FCC bureau be contacted for STA (or perhaps a developmental license).

31. In this regard, EIBASS notes that the Commission's Public Safety and Homeland Security Bureau (PSHSB) web site[14] has the following statement regarding STAs:

> FCC Bureaus and Offices are authorized to issue a Special Temporary Authority (STA) for those subject-matter areas falling under their respective jurisdiction. An STA is the authority granted to a permittee or licensee to permit the operation of a communications facility for a limited period at a specified variance from the terms of the station or service authorization or requirements of the FCC rules applicable to a particular class of station or service. Bureaus and Offices may issue STAs for emergency situations, such as natural disasters, restoration of communications, or other short term operations and whereby the applicant has made a showing that, due to extraordinary circumstances, it cannot wait for the normal licensing process to conclude.

32. EIBASS further notes that a MB Consolidated Data Base System (CDBS) applications search for applications with a facility ID of zero returns 992 records, of which 980 are MB STAs. For example, Station W52ST-D, FCC File Number BDSTA-20100922AON, issued to Axcera for STA operation on former TV Channel 52 at Madison, WI, during the October 6–7, 2010, SBE convention at Verona, NY. Also for example, Station W06ST, FCC File Number BSTA-20090313ACJ, for operation on TV Channel 6 at Tampa, FL, and Station K03ST, FCC File Number BSTA-20101207AFC, for operation on TV Channel 3 at Shreveport, LA, both

---

[13] EIBASS notes that the WTB STA filing fee is the same as OET STA filing fee (namely, $60).

[14] See http://www.fcc.gov/pshs/emergency-information/sta-reports.html .

issued to Live Sports Radio, LLC. These demonstrate that MB STAs are issued for reasonable short term uses.

33. Similarly, a search of the WTB ULS for active STAs returns 1,450 such authorizations. For example, WQNC689, issued to Emmis Radio License for a 945.0 MHz Aural studio-to-transmitter link (STL); WQMH798, issued to King Broadcasting Company for an Inter City Relay (ICR) path from Deer Point to Brush Butte on 6,987.5 MHz (7 GHz TV BAS Channel B5): and WQEE606, issued to Meredith Corporation for a transmitter-to-studio link (TSL) on 12,787.5 MHz (13 GHz TV BAS Channel A04). Further examples are WQMI219, issued to the City of Danville, VA, for two point-to-point paths in the 960 MHz Private Operational Fixed Service (POFS) band, and WQLU777 issued to BP America Production Company for 123.0 MHz in the Gulf of Mexico. These also demonstrate that WTB STAs are issued for reasonable short term uses.

34. Finally, EIBASS notes the February 10, 2011, Commission letter (DA 11-260) sent to WatchTV, Inc., regarding that entity's request that four of its Class A TV stations in the Portland, OR, area be allowed to transmit with non-ATSC standard digital signals. The letter denied the request, stating

> An experimental license is not to be used to introduce a new service that does not comply with our rules, as the request appears to contemplate.
>
> The request thus appears to be more akin to a developmental license, which may in appropriate circumstances be used to introduce a new service that does not comply with our existing rules; however, such a request should be accompanied by a petition for rulemaking seeking changes consistent with the operation under investigation.

EIBASS agrees. The proper vehicle is a developmental license, not an experimental license (in this case, the experimental license, if it would have been appropriate, would have been a Part 74, Subpart A (Experimental Broadcast Stations), authorization, rather than a Part 5 ERS authorization). EIBASS notes that the difference between experimental operation and developmental operation is that developmental operation allows concurrent public participation, and regular programming.

XII. Product Development Trials and Market Trials

35. At paragraph 63 the NPRM proposes relaxed equipment certification rules for Product Development Trials (PDTs) and for Market Trials (MTs). EIBASS believes that it would be a mistake to in effect diminish the current equipment certification process. PDTs and MTs would

be an open invitation for parties to skirt the current requirements for the manufacturing, importation, or sale of RF devices, and could quickly result in the introduction into the marketplace of unapproved RF devices that could cause interference to licensed users. BAS licensees and other licensees would suffer an increased level of interference from these sham trial market devices. Once such devices are introduced into the marketplace, there would be no practical means to reverse that action. EIBASS urges the Commission to keep the lid closed on this equipment-certification-bypass Pandora's Box.

XIII. Screen Room RF Testing and OATS Testing

36. At paragraph 82, the NPRM proposes to amend the Part 5 rules to make it clear that testing of RF devices inside a screen room, which the NPRM refers to as an anechoic chamber or Faraday cage, does not require any FCC authorization, experimental or otherwise. EIBASS supports this proposed rule modification. Potential experimental licensees who go to the expense and trouble of using an RF screen room are the sort of technically adept, aware and informed parties that do not worry EIBASS.

37. In stark contrast, paragraph 83 asks how open area testing sites (OATs) should be handled. Because such sites by definition are not screened or shielded, OATs should always require an FCC license; this could be an experimental license, a Manufacturer's Radio Service (MRS) license, or other Commission authorization. But an OAT facility should always have an authorization record in an FCC database and resultant accountability in the event that harmful interference is caused to any licensed service. Since an OAT facility generally requires a substantial investment in land, structures and hardware, requiring the licensing of such a site in all cases would represent a small and reasonable burden.

XIV. Summary

38. The key to proper experimental testing that minimizes harmful interference to licensed users is notification and disclosure. So long as nearby co-channel licensees have been notified and are aware of the experimental operation, and have been provided with a stop buzzer telephone number to call in the event of harmful interference (so that timely on-off tests can be made and the experimental operation shut down if necessary), EIBASS believes that most of the proposed updated and streamline Part 5 rules would be a step in the right direction.

39. Since experimental licenses have the potential to interfere with licensed operations, the ERS rules should include a provision that summary experimental reports be entered in the ECFS.

40. EIBASS urges the Commission to be more skeptical of requests for experimental authority, and have a higher bar than previously, to ensure that scam, abusive or frivolous experimental applications are not granted. Finally, the Commission needs to conduct periodic spot checks of notification requirements and stop buzzer requirements, and to issue NALs for any failure to strictly comply with those requirements.

List of Figures

41. The following figures or exhibits have been prepared as a part of these ET Docket 10-236 comments:

1. Alfred Mann Foundation WD2XLW example of inappropriately suppressed technical information
2. Figure showing genesis of the "SBE Clause" on experimental licenses granting operation on broadcast or BAS frequencies
3. The WC2XOV experimental license.

Respectfully submitted,

/s/ Dane E. Ericksen, P.E., CSRTE, 8-VSB, CBNT
EIBASS Co-Chair
Hammett & Edison, Inc., Consulting Engineers
San Francisco, CA

/s/ Richard A. Rudman, CPBE
EIBASS Co-Chair
Remote Possibilities
Los Angeles, CA

March 8, 2011

EIBASS
http://www.eibass.org/
18755 Park Tree Lane
Sonoma, CA 94128
707/996-5200
dericksen@h-e.com

WD2XLW Example

From: Richard Rudman <rar01@mac.com>
Date: April 4, 2009 4:35:25 PM PDT
To: Julius.Knapp@fcc.gov
Subject: **Request for documents: ET Docket 09-36**

Mr. Julius Knapp
Chief, OET
FCC
445 12th Street
Washington, DC 20554

Dear Mr. Knapp:

I am Chairman of the SBE Government Relations Committee, the SBE committee tasked with drafting SBE FCC comments. The SBE Board of Directors has decided that the Society will be filing comments to the ET Docket 09-36 rulemaking concerning medical micro-power network service (MMNS) devices operating at 451-457 MHz. SBE notes that such operation, should it be licensed, would be co-channel to the 455-456 MHz Part 74, Subpart D, Remote Pickup (RPU) band, and immediately adjacent-channel to the 450-451 MHz RPU band.

In its December 3, 2007, reply comments to RM-11404, the predecessor to 09-36, the Alfred Mann Foundation (AMF) noted that it had obtained an experimental license for its proposed MMNS devices. A search of the OET web site reveals this to be experimental station WD2XLW. While the WD2XLW exhibits list shows nine six-month progress reports (required by the WD2XLW grant), all are listed as "not available" because of AMF's request for confidentiality. The AMF letter requesting such confidentiality (which is available) states that the reason is to keep competitors who might also want to market MMNS devices from learning any AMF trade secrets.

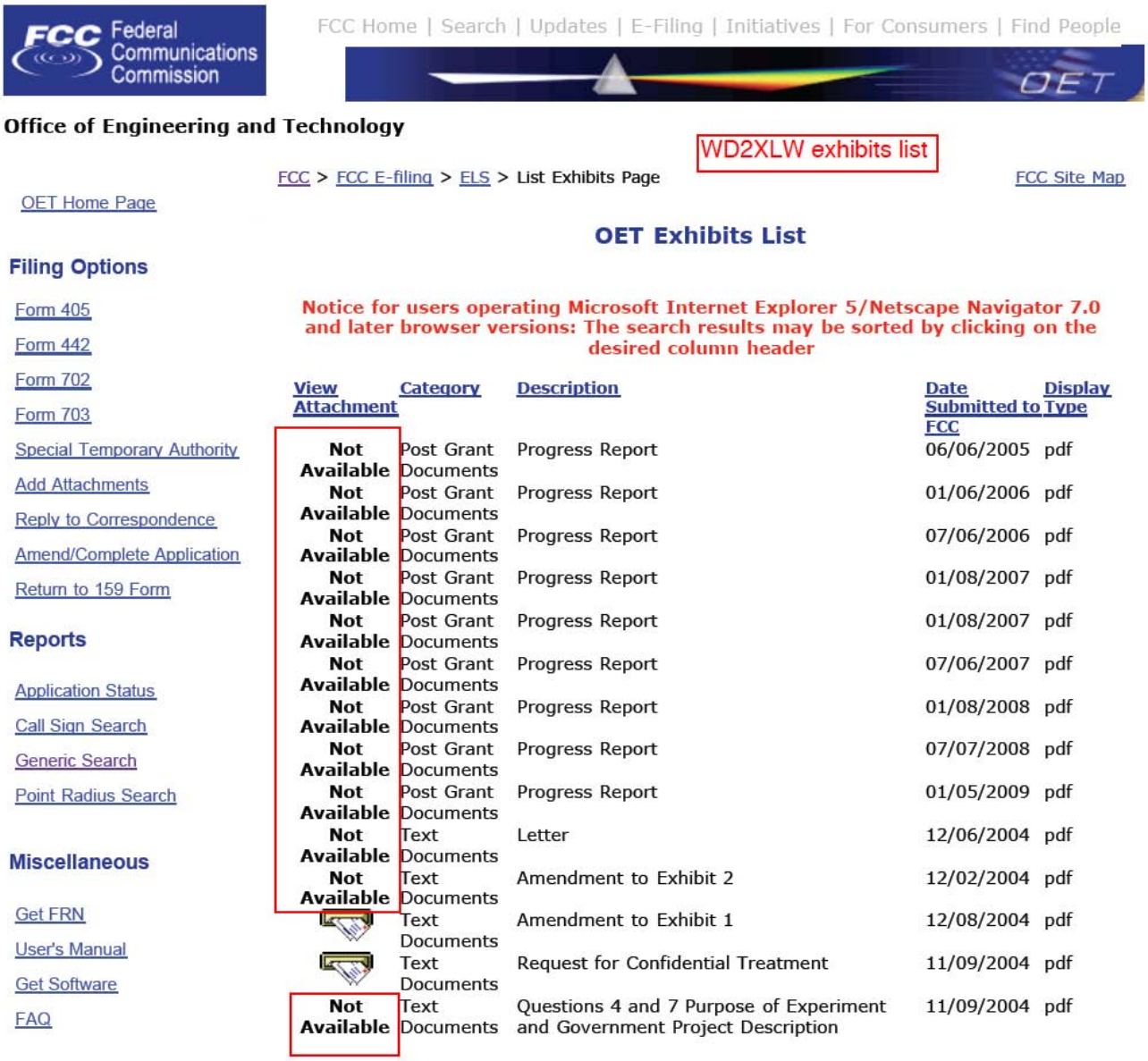
I believe that because AMF chose to disclose the existence of its experimental license in its RM-11404 reply comments, and since the Commission has elected to upgrade RM-11404 to an NPRM, it is no longer appropriate for the FCC to treat the WD2XLW materials as "not available." Since SBE is not in the business of manufacturing or marketing medical devices, it is not a threat to AMF. SBE believes certain information that may be contained in those documents is germane to preparation of its WD2XLW filings in its ET 09-36 comments. However, I am prepared to agree that I will not further distribute the W2DXLW materials, or include information contained therein that is NOT germane to its Comments.

WD2XLW Example

Accordingly, I hereby request that the WD2XLW progress reports, plus the other three "not available" documents shown on the attached PDF copy of the WD2XLW exhibits list, be released to SBE.

Respectfully,

Richard A. Rudman, CPBE
Chairman, SBE GRC



FCC Federal Communications Commission

FCC Home | Search | Updates | E-Filing | Initiatives | For Consumers | Find People

OET

Office of Engineering and Technology

WD2XLW exhibits list

FCC > FCC E-filing > ELS > List Exhibits Page

FCC Site Map

OET Home Page

Filing Options

Form 405
Form 442
Form 702
Form 703
Special Temporary Authority
Add Attachments
Reply to Correspondence
Amend/Complete Application
Return to 159 Form

Reports

Application Status
Call Sign Search
Generic Search
Point Radius Search

Miscellaneous

Get FRN
User's Manual
Get Software
FAQ

OET Exhibits List

Notice for users operating Microsoft Internet Explorer 5/Netscape Navigator 7.0 and later browser versions: The search results may be sorted by clicking on the desired column header

View Attachment	Category	Description	Date Submitted to FCC	Display Type
Not Available	Post Grant Documents	Progress Report	06/06/2005	pdf
Not Available	Post Grant Documents	Progress Report	01/06/2006	pdf
Not Available	Post Grant Documents	Progress Report	07/06/2006	pdf
Not Available	Post Grant Documents	Progress Report	01/08/2007	pdf
Not Available	Post Grant Documents	Progress Report	01/08/2007	pdf
Not Available	Post Grant Documents	Progress Report	07/06/2007	pdf
Not Available	Post Grant Documents	Progress Report	01/08/2008	pdf
Not Available	Post Grant Documents	Progress Report	07/07/2008	pdf
Not Available	Post Grant Documents	Progress Report	01/05/2009	pdf
Not Available	Text Documents	Letter	12/06/2004	pdf
Not Available	Text Documents	Amendment to Exhibit 2	12/02/2004	pdf
	Text Documents	Amendment to Exhibit 1	12/08/2004	pdf
	Text Documents	Request for Confidential Treatment	11/09/2004	pdf
Not Available	Text Documents	Questions 4 and 7 Purpose of Experiment and Government Project Description	11/09/2004	pdf

Genesis of the "SBE Clause" on Experimental Authorizations

SOCIETY OF BROADCAST ENGINEERS, INC.

9102 North Meridian Street, Suite 150 • Indianapolis, IN 46260
Phone: (317) 846-9000 • Fax: (317) 846-9120 • Website: www.sbe.org

by e-mail: james.burtle@fcc.gov

August 3, 2006

Mr. James R. Burtle
Chief, Experimental Licensing Branch
Office of Engineering & Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Jim:

As you know, the OET and the SBE have had in place, since 1996, an informal understanding that OET experimental licenses and experimental special temporary authority (STA) grants that authorize operation on broadcast or broadcast auxiliary service (BAS) frequencies would include an "SBE coordination clause." This clause requires the experimental station operator to contact SBE headquarters prior to commencing operation and provide contact information. The purpose of this clause is to ensure that if interference is caused to broadcast or BAS operations the local SBE-affiliated frequency coordinator will have a "hot line" telephone number to call, to see if the experimental station might be the problem.*

The SBE appreciates this cooperation, and believes that it should continue, since it benefits both broadcasters and the FCC by minimizing the likelihood of harmful interference being inadvertently caused to a licensed radio service. However, the SBE has noted several experimental grants being issued without the SBE clause. These recent grants are listed on the attached Figure 1.

On the assumption that these grants without the SBE clause were inadvertent, the SBE Executive Committee thought that it might be helpful to provide a list of

---

* The exact wording is

```
Operation is subject to prior coordination with the Society of
Broadcast Engineers, Inc. (SBE); ATTEN: Executive Director,
9247 North Meridian Street, Suite 305, Indianapolis, IN 46260;
telephone 866-632-4222; FAX, 317-846-9120; e-mail:
executivedir@sbe.org; information: www.sbe.org.
```

Please note, however, that the current SBE address is now 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. All of the other SBE contact information is unchanged.

broadcast and BAS frequency bands that the SBE believes should trigger the clause if an experimental license or STA authorizes operation on any of those frequencies.

Sincerely,

Chriss Scherer, CPBE, CBNT
SBE President

Enclosures (2)

cc: Mr. Julius Knapp, OET Deputy Chief by e-mail: julis.knapp@fcc.gov
Mr. Ralph Beaver, CBT, Chairman, SBE Frequency Coordination Committee by e-mail: bevo@media-alert.com
Mr. Dane E. Ericksen, P.E., CSRTE, 8VSB, CBNT, Chairman, SBE FCC Liaison Committee by e-mail: dericksen@h-e.com
Mr. John Poray, CAE, SBE Executive Director by e-mail: jporay@sbe.org

Frequency Bands Requested to be Subject to the SBE Frequency Coordination Clause for OET Experimental Licenses and Experimental STAs

Frequency	Service(s)
535–1,705 kHz	AM broadcast
25.85–26.49 MHz	HF RPU & Subpart H LPA
54-72 MHz	VHF low band TV & Subpart H LPA
76–88 MHz	VHF low band TV & Subpart H LPA
88-108 MHz	FM
152.85–153.36 MHz	VHF RPU
160.85–161.80 MHz	VHF RPU
166.25 MHz	VHF RPU
170.15 MHz	VHF RPU
174-216 MHz	VHF high band TV & Subpart H LPA
450.00–451.00 MHz	UHF RPU & Subpart H LPA
455.00–456.00 MHz	UHF RPU & Subpart H LPA
470–806 MHz	UHF TV & Subpart H LPA
944–952 MHz	Aural BAS and Subpart H LPA
1,990–2,110 MHz*	2 GHz TV BAS
2,450–2,500 MHz†	2.5 GHz TV BAS
6,425–6,525 MHz	6.5 GHz TV BAS
6,875–7,125 MHz	7 GHz TV BAS
12,700–13,250 MHz	13 GHz TV BAS
17,700–18,140 MHz	18 GHz Aural & TV BAS
18,364–19,700 MHz	19 GHz Aural & TV BAS

* 2,025–2,110 MHz once the 2 GHz TV BAS transition is completed.
† Includes grandfathered TV BAS Channel A10, 2,483.5–2,500 MHz, still extensively used by broadcasters.

SOCIETY OF BROADCAST ENGINEERS, INC.
Indianapolis, Indiana

060730.1
Figure 2

The WC2XOV Experimental License

Claude E. Wells, P.O. Box 4906, 195 Chesapeake Park Plaza, Baltimore, MD 21220-0906

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE

EXPERIMENTAL	WC2XOV
(Nature of Service)	(Call Sign)
XD FX	0101-EX-RR-2010
(Class of Station)	(File Number)

NAME Lockheed Martin Corporation

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(k) of the Commission's Rules

ANY INFORMATION NOT CONTAINED IN THIS LICENSE MAY BE CLASSIFIED

Station Locations

(1) MOORESTOWN (BURLINGTON), NJ - NL 39-58-36; WL 74-54-37

Special Conditions:

(1) Licensee is authorized operation in accordance with the parameters stated in the classified application on file with the Commission.

This authorization effective May 02, 2010 and
will expire 3:00 A.M. EST April 01, 2015

FEDERAL COMMUNICATIONS COMMISSION

Page 1 of 1

This grant reminds EIBASS of the line from the 1986 movie Top Gun: "I could tell you, but then I'd have to kill you."